

Title (en)

Ink-jet recording head and ink-jet recording apparatus

Title (de)

Tintenstrahlaufzeichnungskopf und Tintenstrahlaufzeichnungsapparat

Title (fr)

Tête d'enregistrement à jet d'encre et appareil d'enregistrement à jet d'encre

Publication

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Application

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Priority

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- JP 2002019812 A 20020129

Abstract (en)

An ink-jet recording head includes a passage-forming substrate (10) and a plurality of piezoelectric elements (300) provided on one side of the passage-forming substrate via a vibration plate, the passage-forming substrate having a plurality of pressure generating chambers (12) formed therein in such a manner as to communicate with corresponding nozzle orifices (21) and as to be separated from one another by means of a plurality of compartment walls, the plurality of piezoelectric elements each including a lower electrode (60), a piezoelectric layer (70), and an upper electrode (80). The vibration plate undergoes tensile stress; the number n of the pressure generating chambers arranged per inch is more than 200 and is related to width w of the pressure generating chamber and thickness d of the compartment wall as represented by $(w + d) = 1 \text{ inch}/n$; and the thickness d of the compartment wall is more than $10 \mu\text{m}$ and is related to thickness h of the passage-forming substrate as represented by $(d \times 3) \leq h \leq (d \times 6)$. Thus, the rigidity of the compartment walls is maintained. <IMAGE>

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Citation (applicant)

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